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ABSTRACT

The study tested the Andersen-Newman causal model of social service use as a means of determining patterns for social service use by Mexican American elderly. The model was shown to have applicability for identifying common and unique determinants of service use. Thirty-seven variables and data from a 1979-80 15-state survey were selected to form a subset of responses from 1,164 noninstitutionalized Mexican or Mexican American individuals aged 55 and over. Four variables were found to directly affect use of social services: knowledge of social services, need, health status, and income. The primary role of knowledge of services which emerged from the study was shown to have policy and administrative implications and it was suggested that more attention be focused on information processing activities and referral techniques. Tables of variables, relationships, systems utilization models, and individual determinants, and a 42-item bibliography are appended. (LFL)

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THE UTILIZATION OF SOCIAL SERVICES BY THE MEXICAN-AMERICAN ELDERLY

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THE UTILIZATION OF SOCIAL SERVICES BY THE MEXICAN-AMERICAN ELDERLY

One of the knowledge gaps in empirical research on utilization of service is that little attention has been given to testing causal models of use among the various ethnic elderly groups. The purpose of this study is to analyze the pattern of determinants of social service use among the Mexican-American elderly. A causal model of social service use was tested using a subsample of data obtained from a national needs assessment interview of 1,805 randomly selected noninstitutionalized elderly Hispanics. The findings, indicate that knowledge of social services, need for social services, perceived health status and income have direct effects on the use of social services. The major findings are discussed in relationship to past empirical research.

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Introduction

Research studies are increasingly focusing more attention on the determinants of social service utilization among the elderly (Krout, 1981; Coulton and Frost, 1982). This attention appears to have resulted from the conflict between society's need to provide services to certain population groups such as the aged, poor, and minorities while at the same time not depleting our slack national resources (Andersen and Newman, 1973; Gates, 1980; Estes, 1979). However, we have relatively little empirical knowledge about the patterns and correlates of social service use among these most needy economic groups. The purpose of this study is to analyze the pattern of determinants of social service use among the Mexican-American elderly.

As in other areas of minority aging research, empirical studies of the social service use of the Mexican-American elderly are few. Descriptive studies by Valle and Mendoza, 1978, Cuellar and Weeks, 1980, and Lacayo, 1980 have been the foundation for expanding empirical research into social service use by Mexican-American elderly. Few studies have attempted to determine the causal order among the determinants of service use. Moreover, few studies have simultaneously explored the full range of individual, family and community characteristics that determine social service utilization (Krout, 1981; McKinlay, 1972; Ward, 1977). This lack of empirical information leaves us with many unanswered questions for future research such as: (1) what is the relationship between awareness of service, need for services and use of services?; (2) what is the exact relationship between health, subjective well being and use of social services?; and (3) are models of health utilization sufficient for explaining the determinants of social service use among aging ethnic groups?

Previous research on the utilization of services by the elderly has found utilization to be partially determined by various sociodemographic factors (Kutner, et al., 1956; Shanas, 1962; Shanas et al., 1968; McKinlay, 1972; Neugarten, 1974; McCaslin and Calvert, 1975; Downing, 1978; Kulka, et al., 1979; Kessler et al., 1981; Mindel and Wright, 1982). Several studies have found that social and psychological factors influence the utilization of services (Coe and Wessen, 1965; Battistell, 1968; Fabrega and Roberts, 1972; Andersen and Newman, 1973; Harris, 1975; Ward, 1977; Lowy, 1979). Other studies suggest that economic, community, geographic, organizational, societal and environmental factors are related to utilization (Palmore, 1972; McKinlay, 1972; Andersen et al., 1972; Hammerman, 1974; Cutler, 1975; Cantor and Mayer, 1976; Ward, 1977). More important, some recent studies suggest that perception and number of needs, knowledge of services, availability and accessibility of formal support systems, and previous contact with formal services are critical factors influencing utilization (McKinlay, 1972; German, 1975; Wright et al., 1979; Snider, 1980; Starrett, et al., 1983; Hess and Markson, 1980; Mindel and Wright, 1982; Coulton and Frost, 1982; Wan, 1982). These studies suggest that the need for care is the most important variable determining utilization, when all the other factors are controlled.

Conceptual Framework

The conceptual model employed in this study is based on a general framework proposed by Andersen (Andersen, 1968; Andersen and Newman, 1973) for conceptually categorizing the determinants of medical service use. This framework was later suggested by Ward (1977) for studying

various types of service use (i.e., medical, social, mental) among the elderly. This model conceptualized the individual's demand for services as a function of a complex pattern of relationships among predisposing, enabling and need factors. It suggested that some individuals are more predisposed to use services due to certain background characteristics such as demographic, social structural, and belief factors (Predisposing Factor). Although, individuals may have differential propensities to use services, the use of such services is contingent on the availability and accessibility of community resources as well as the individual's family resources (Enabling Factor). Finally, assuming that the above conditions exist, the individual must recognize the presence of a need for services and be motivated to take some form of formal action before actual service use takes place (Need Factor). In this study the above framework was employed to categorize and analyze the variables that affect the overall process of social service utilization by the Mexican-American elderly.

The purpose of this study was to test a causal model of social service utilization by the Mexican-American elderly. The results should aid in assessing the following: (1) which factors are most important in determining the number of social services utilized; (2) the magnitude of the direct and indirect effects of the determinants of utilization; (3) the extent to which variance in utilization can be explained by the variables in the model; and (4) whether or not a model of medical service use is appropriate for studies in social service use among the Mexican-American elderly. The main focus of this study is on the use of social services among the Mexican-American elder to whom the Andersen-Newman model of utilization is being applied.

Data and Methods

This study was a secondary analysis of a data set collected in 1979-80 entitled "A National Study to Assess the Service Needs of the Hispanic Elderly" (Principle Investigator, Carmela G. Lacayo) and provided by the National Association for Hispanic Elderly. The data was gathered from a national area probability sample. A subset of 1,164 non-institutionalized Hispanic individuals age 55 and over that identified themselves as either Mexican or Mexican-American were selected for this study. The characteristics of the sample are ethnic identity (Mexican 49.8% and Mexican-American 50.2%); gender (male 50%, female 50%); mean age (67); mean education (4.2) years; marital status (54.2% married; 45.8% not married), and mean family income was ($4,999).

The original study data were obtained from cross sectional survey interviews administered in the home using a pretested instrument constructed by the National Association of Hispanic Elderly in consultation with the Administration of Older Americans (AOA), the United States Bureau of Census and Kaiser Permanent Research Department. The resulting instrument was a combination of the Older American Resources and Services Functional Assessment Questionnaire (OARS) and the Subjective Distress Scale of Psychiatric Status Schedule (PSS). Thirty-seven variables were selected from this data for the current study and classified according to Andersen and Newman's framework, as shown in Figure 1.

INSERT FIGURE 1

Measurement Section

Predisposing Factor. The demographic variables were measured as follows: Nativity (United States = 1, Other = 0); U. S. Citizenship (yes = 1, no = 0); and gender was dichotomized (Male = 1, female = 0). Age was measured by actual age. The social structural variables were measured as follows: ethnicity was dummy coded (Mexican = 1, Mexican-American = 0); education was measured by actual grade completed; acculturation was measured by summing the scores of those respondents that rated the amount of time spent in English (3), both (2), Spanish (1) on five activities (i.e., watching television, listening to the radio, talking on the phone, reading a newspaper and reading a magazine). The Cronbach's alpha reliability coefficient was .76 for the measure of acculturation. Family size was measured by actual number of children; residential mobility was measured on a scale ranging from 0 through 5 (no other city = 0, five or more cities = 5); employment status was dummy coded (working = 1, disabled = 1, housewife = 1, retired = 0); and social economic status was measured using the United States Census Work Classification Code ranging from 0 through 100. The belief variables of perceived sexual, racial and age discrimination acts experienced by the respondent.

Enabling Factor. The community variables were measured as follows: urban or rural residency was dichotomized, (Urban = 1, Rural = 0); age density was measured by the actual percentage of elderly residents in that census tract; accessibility of transportation was measured by the actual number of blocks to the bus stop; church attendance was measured on a scale ranging from 1 through 6 (never = 1, more than once a week = 6); participation in senior citizen church activity was measured on a

scale ranging from 1 through 5 (never = 1, very often = 5); contact with friends/neighbors was measured on a scale ranging from 0 through 4 (none = 0, everyday = 4); and perceived neighborhood cohesiveness was measured by summing the number of reasons why a respondent does not move. Cronbach's alpha reliability coefficient for this measure was .76. The family variables were measured as follows: living arrangement was dichotomized (no one = 1, other = 0) (spouse = 1, other = 0) (both spouse and children = 1, other = 0) (children = 1, other = 0) for each variable; annual family income was measured on a scale ranging from 1 through 15 (0-499 = 1, 40,000-above = 15); contact with kin was measured separately for contact with children and relatives on a scale ranging from 0 through 4 (none = 0, everyday = 4); knowledge of social services was measured by summing the number of services out of 13 that the respondent was aware of.

Need Factor. The need variables were measured as follows: Self-rated health status was measured on a scale ranging from 1 through 5 (very poor = 1, very good = 5), severity of illness was measured by summing the number of perceived doctor stated illnesses and their functional limitation, and functional ability was measured by summing the number of daily living tasks out of 12 mentioned by the respondent that they could do. Cronbach's alpha reliability coefficient for this measure was .87. Need for social services was measured by summing the number of services needed out of 13 mentioned by the respondent. Negative well being was measured by summing the number of psychosocial distressing events out of 4 mentioned by the respondent. Cronbach's alpha reliability coefficient was .71 for this measure.

Utilization. The utilization of social services was measured by summing the number of services used out of 13 mentioned by the respondent. The thirteen service categories were education courses to prepare for retirement, local rides, home delivered meals, meals at senior centers, assistance with housework, information about programs, legal aid, consumer education, food stamps, assistance with income tax, financial assistance for rent and medical care, and recreational programs.

The method of analysis used to ascertain the relative importance and interrelationship of the variables employed in the model was path analysis. In general, path analysis proceeds by solving a series of recursive regression equations in which each of the previously independent and independent variables is accounted for by direct, indirect and unexplained effects while at the same time controlling for the effects of all other variables in the equation (Kerlinger and Pedhazur, 1973; Schumm et al., 1980; Nie et al., 1975).

Findings

The zero order correlation coefficients for all the determinants of social service use along with their means and standard deviations are presented in Table 1. The findings indicate that the Pearson Correlations were low to moderately correlated ruling out the problem of multi-colinearity (Schumm, et al., 1980).

INSERT TABLE 1

The basic model presented earlier was transformed into a set of structural equations from which path coefficients (beta weights) or

standardized partial regression coefficients can be estimated. Due to the large number of variables, large sample size and desire to achieve parsimony, only path coefficients that were both statistically significant at better than .05 level and explained at least 1% of the variance were retained in the final path model (Mindel and Wright, 1982).

INSERT FIGURE 2

INSERT TABLE 2

The results of the path diagram (Figure 2) and the decomposed path association (Table 2) indicate that four of thirty-seven variables in the study directly affected the utilization of social services by the Hispanic elderly. These four variables jointly accounted for 32% of the variance in use. The most important predictor of use was knowledge of social services (beta = .42) followed by need (Beta = .23), health status (Beta = -.11) and income (beta = -.09) respectively. Moreover, these four variables in turn acted as important intervening variables for the indirect effects of the other significant enabling and predisposing variables.

The results indicate that only two of the need variables (i.e., need for social services and self rated health status) directly predicted use. Generally, the poorer the elderly person's health or the more need for social services, the greater is the use of services. Moreover, need for social services was directly affected by perceived health status (-.12) and education (-.10) and perceived health status was directly affected by family income (.19).

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Several important need variables (i.e., functional ability, negative well being and illness severity) were dropped from the final path model due to their lack of significance.

Of the variables included in the enabling factor only two, knowledge of social services, and family income, directly affected use. The greater the Hispanic elderly person's awareness of services or the lower their income the greater is their use of service. Moreover, knowledge of social services was directly affected by five variables: respondents were more aware of services if they lived alone or with a spouse, participated in senior church activities, were more mobile, or Mexican-American. Annual family income was directly affected by five variables: annual family income was lower for persons living alone, or being older in years; and higher for persons married, better educated or Mexican.

Several important variables, four of the family variables; contact with children, contact with relatives, living with child and living with spouse and children; and six of the community variables; perceived neighborhood cohesiveness, contact with friends, church attendance, accessibility of transportation, age density of the area and urban or rural residence, did not have any significant effect within the model and were dropped from the final path model.

Regarding the variables included in the predisposing factor, none had a direct effect on utilization. Eleven variables: maturity, gender, acculturation, family size, employment status (i.e., working, disabled and housewife), social economic status, and perceived racial, sexual and age discrimination had no significant paths to use and were dropped from the model. However, residential mobility, education, ethnicity, U. S. Citizenship and age all affected use indirectly through the enabling and need factors.

Discussion

The conceptual framework of medical service use proposed by Andersen and Newman (1973) provided a heuristic tool for analyzing the social service behavior of the Mexican-American elderly. Two of the need factors: need for social services, and health status directly affected use. This finding in general is supported by much of the literature (Krout, 1981; Mindel and Wright, 1982; Downing, 1972). Two of the enabling factors, knowledge of social services and annual family income were found to directly affect use, which is in agreement with other empirical studies (Mindel and Wright, 1982; Ward, 1977; Cantor, 1975; Starrett, Mindel and Wright, 1983). Finally, it was found that the predisposing factors had no direct effect on use but were important when mediated through the enabling and need variables (Aday and Eichhorn, 1972; Wolinsky, 1978; Wan, 1982). In sum, the applicability of the Andersen and Newman (1973) model for studying the social service use by the Mexican-American elderly was supported by the congruency between the findings of this study and past empirical studies as well as by the amount of variance explained within the framework.

The major difference in social service behavior was found in the important role of awareness of service among the Mexican-American elderly. Although past research has suggested the importance of consumer information none have found the amount of information to be the most important determinant of use (Mindel and Wright, 1982; Snider, 1980; Krout, 1981). In addition the independent relationship between awareness and need for services has important policy and administrative implications for consumption of services. The provision of relevant information about service availability must be coupled with education

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programs based on the appropriate use of services. Moreover, because of the important role of church activities in increasing the information available to the elderly, service providers should provide linking mechanisms and educational programs to church groups.

Other significant differences were found among the important indirect role of the predisposing factors. The effect of ethnicity on knowledge for the Mexican-American elderly and on income for the Mexican may suggest, among other factors, that the Mexican-American population has lower income and greater knowledge and use of services. Moreover, the fact that those elderly who are more mobile have greater knowledge of social services seems to suggest that those elderly who are longer residents in a community may not have access to information if they don't participate in church activities or are Mexicans. In sum, the differential importance of ethnicity, and the other significant background characteristics suggests that service providers need to consider these factors in delivery of services to the Mexican-American elderly.

The central purpose of this study was to test a causal model of social service use among the Mexican-American elderly. This model was shown to have applicability for identifying both the common and unique determinants of social service use. Moreover it was suggested that policy makers and service providers focus more attention on the information processing role in service use rather than on those determinants that are less amenable to change. However, it is suggested that preventive programs and policies evolve to achieve a greater equity in the income differential of the Mexican-American elderly and to reduce the overall need for services and lower health status of this population.

Future research would do well to explore the differential use rate within and between various ethnic groups, while at the same time paying more attention to background characteristics. Moreover, the role of information processing needs to be studied more thoroughly and its relationship to the consumption of different types of services established. Finally, in an age of high technological development and high information availability how can alternative delivery systems be utilization at a minimum cost to our resources. On the other hand, if the role of information processing and decision making process of the client is better understood how can misuse of this information be presented, particularly in the forms of overconsumption by the client and withholding of information by the provider system.

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TABLE 1

Zero order correlation coefficients, means and standard deviation for the determinants of social service use. (unit of measurement is found in methods section)

Independent Variables	Zero Order Correlation	Means	Standard Deviations
X-37 Nativity (US=1)	.05	.55*	.50
X-36 U. S. Citizen (yes=1)	.01	.67*	.47
X-35 Gender (male=1)	-.05	.50*	.50
X-34 Age	.17	66.73	8.79
X-33 Ethnicity (Mexican=1)	-.13	.50*	.50
X-32 Education	-.20	4.21	3.62
X-31 Acculturation (scale=1-5)	-.06	6.39	3.71
X-30 Family Size	-.07	4.63	2.61
X-29 Residential Mobility	.03	.27	.73
X-28 Working (yes=1)	-.14	.27*	.44
X-27 Disabled (yes=1)	.07	.18*	.38
X-26 Housewife (yes=1)	.02	.27*	.44
X-25 S.E.S. (scale=0-100)	-.09	29.44	21.75
X-24 Racial Discrm. (scale=0-4)	.02	.16	.54
X-23 Sexual Discrm. (scale=0-4)	-.09	.03	.23
X-22 Age Discrm. ASC (scale=0-4)	.04	.12	.47
X-21 Urban or Rural (urban=1) Residence	-.08	.81	.40
X-20 Age Density	.04	5.92	3.02
X-19 Accessibility of Transport.	.03	3.07	4.43
X-18 Church Attendance(scale=1-6)	.03	3.93	1.60
X-17 Participation in Senior Church Activities(scale=1-5)	.16	1.33	.87
X-16 Contact with Friends/ Neighbors (scale=0-4)	.11	1.23	1.34
X-15 Preceived Neighborhood Cohesiveness (scale=0-4)	.01	3.31	1.09
X-14 Living Alone (yes=1)	.19	.24*	.43
X-13 Living Spouse (yes=1)	.01	.30*	.46
X-12 Living Children (yes=1)	-.05	.15*	.36
X-11 Living Both (yes=1)	-.14	.24*	.43
X-10 Annual Family Income	-.21	$4999	1.97
X-9 Contact with Relatives (scale=0-4)	.09	.74	1.07
X-8 Contact with Children (scale=0-4)	.04	1.04	1.23
X-7 Knowledge of Social Services (scale=0-13)	.47	4.60	3.65
X-6 Health Status (scale=1-5)	-.19	3.33	1.01
X-5 Severity of Illness	.14	4.46	4.43
X-4 Functional ability (scale=0-12)	-.16	10.51 (high funct.)	2.26
X-3 Neg. Well-Being(scale=0-4)	.17	1.11	1.27
X-2 Need for Social Services (scale=0-13)	.27	3.23	3.45

*The mean reflects the percentage of subjects that responded to the question.

TABLE 2

Total associations, direct and total indirect effects of the significant relationships in the model

Dependent Variable and the Coefficient of Determination(r^2)	Independent Variables	Total Association	Direct Effect	Total Indirect Effect
Social Service Utilization (R^2 = .32)	Need	.27	.23 ***	.04
	Health Status	-.19	-.11 ***	-.08
	Knowledge	.47	.43 ***	.04
	Family Income	-.21	-.09 ***	-.12
Need for Social Services (R^2 = .03)	Health Status	-.14	-.12 ***	-.02
	Education	-.14	-.10 ***	-.04
Self Rated Health Status (R^2 = .04)	Family Income	.21	.19 ***	.02
Knowledge of Social Services (R^2 = .13)	Alone	.12	.12 ***	
	Spouse	.06	.08 ***	-.02
	Senior Church Activity	.21	.19 ***	.02
	Mobility	.18	.15 ***	.03
	Mexican American	-.22	-.17 ***	-.05
Anqual Family Income (R^2 = .20)	Alone	-.25	-.15 ***	-.10
	Spouse	.20	.14 ***	.06
	Education	.32	.30 ***	.02
	Mexican	.04	.12 ***	-.08
	Age	-.23	-.14 ***	-.09
Lives Alone (R^2 = .04)	Age	.19	.19 ***	

*** Indicates significance at .0001 level

** Indicates Significance at .001 level

R^2 = Amount of variance explained

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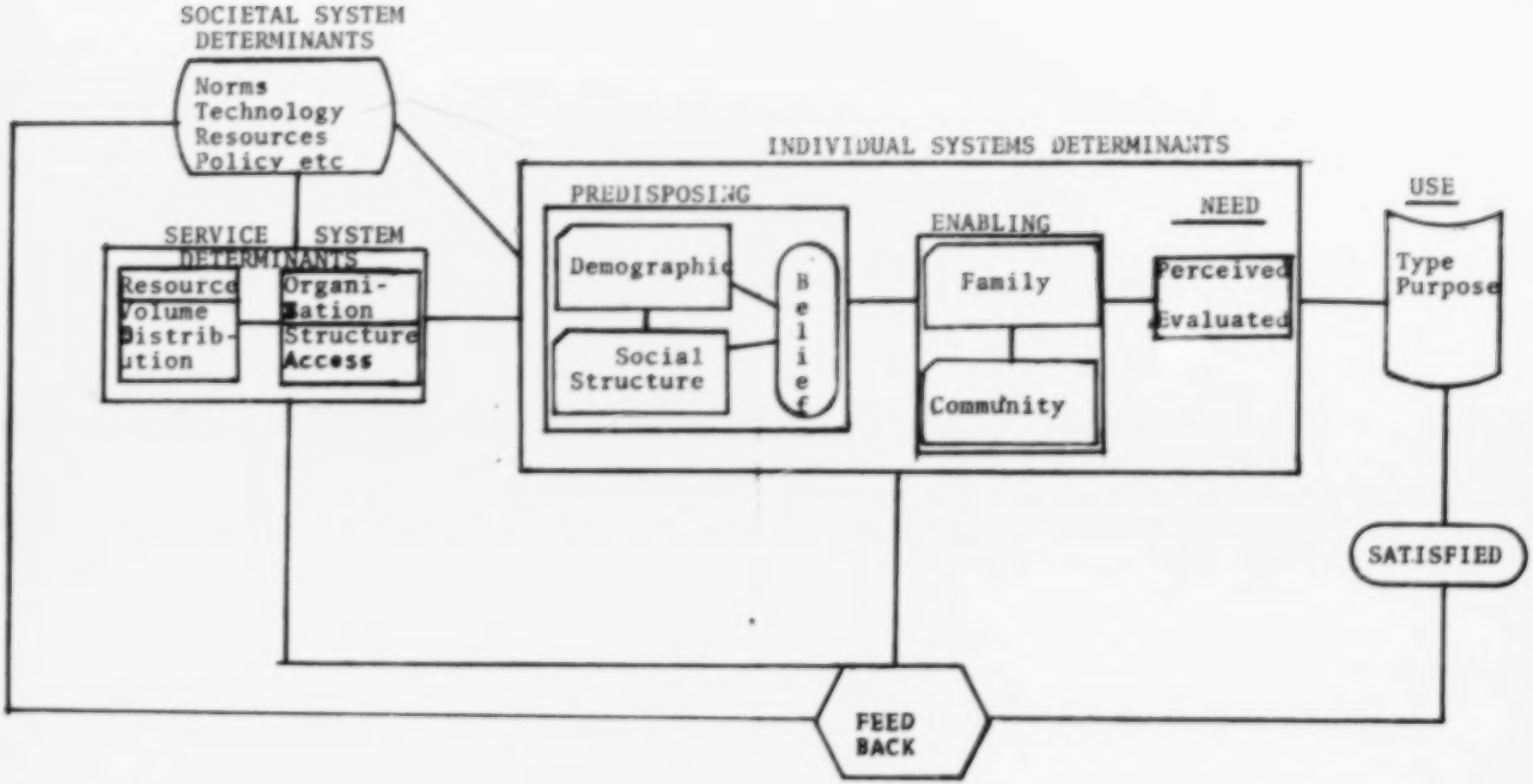
SYSTEMS MODEL OF UTILIZATION



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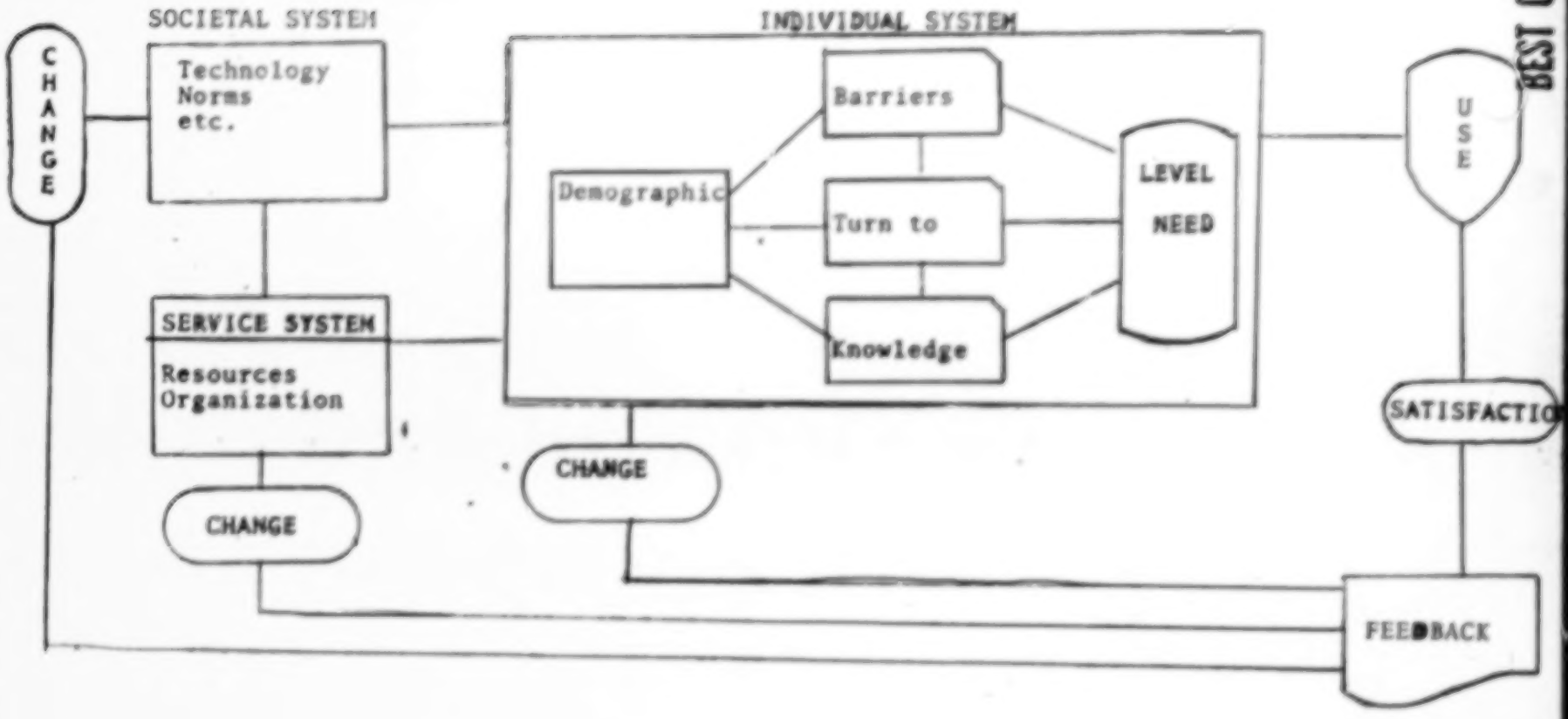
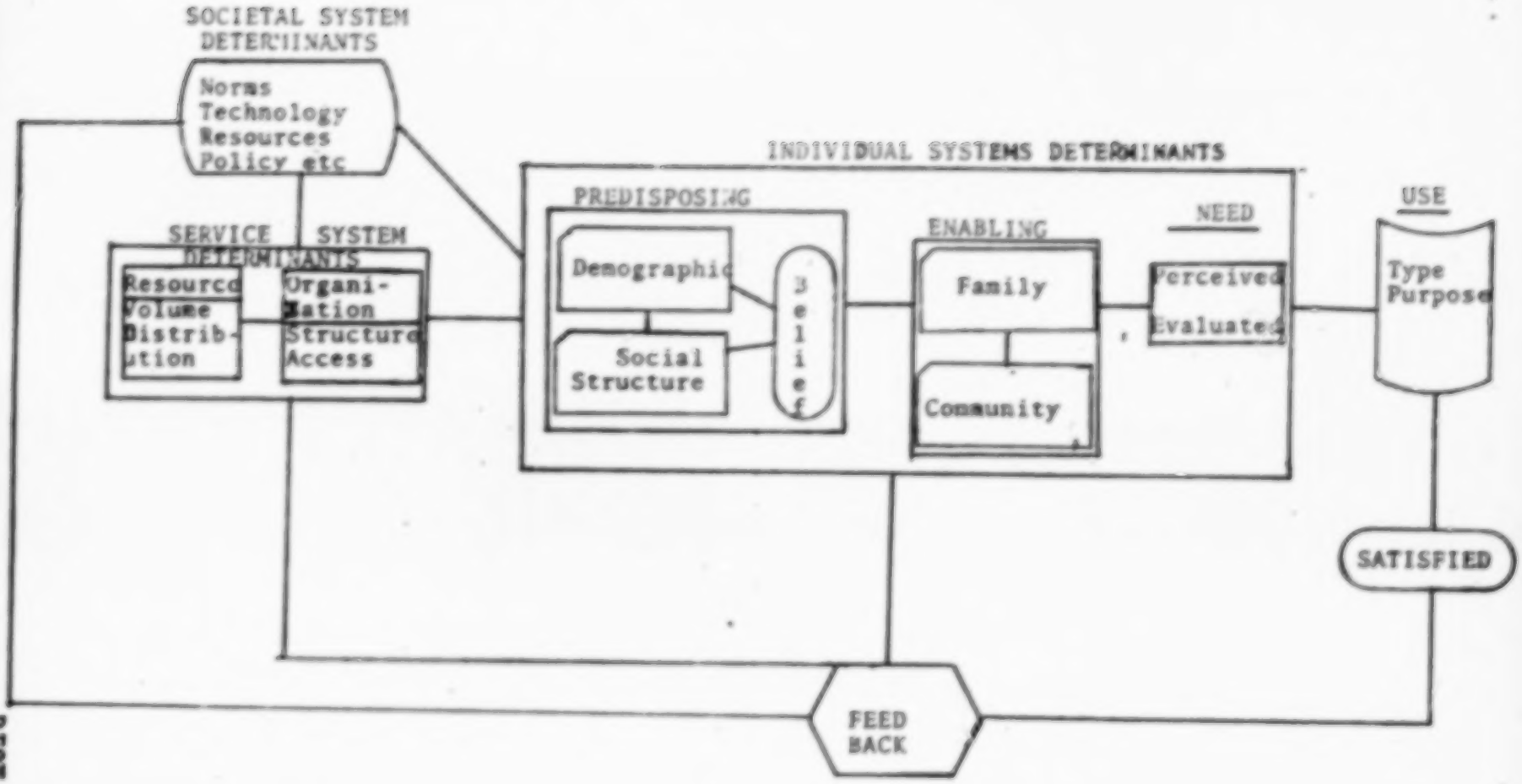


SYSTEMS MODEL OF UTILIZATION



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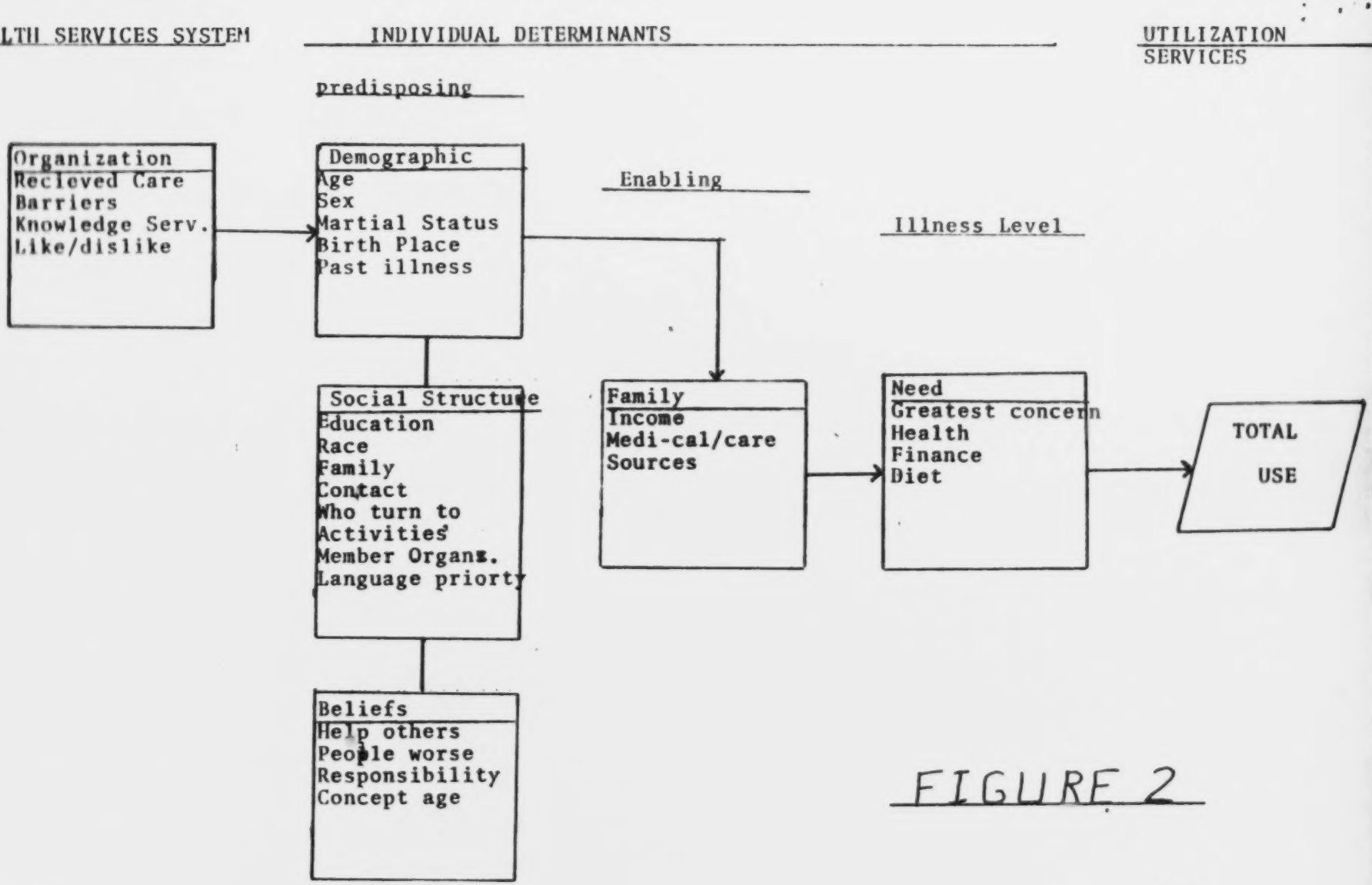

FIGURE 2

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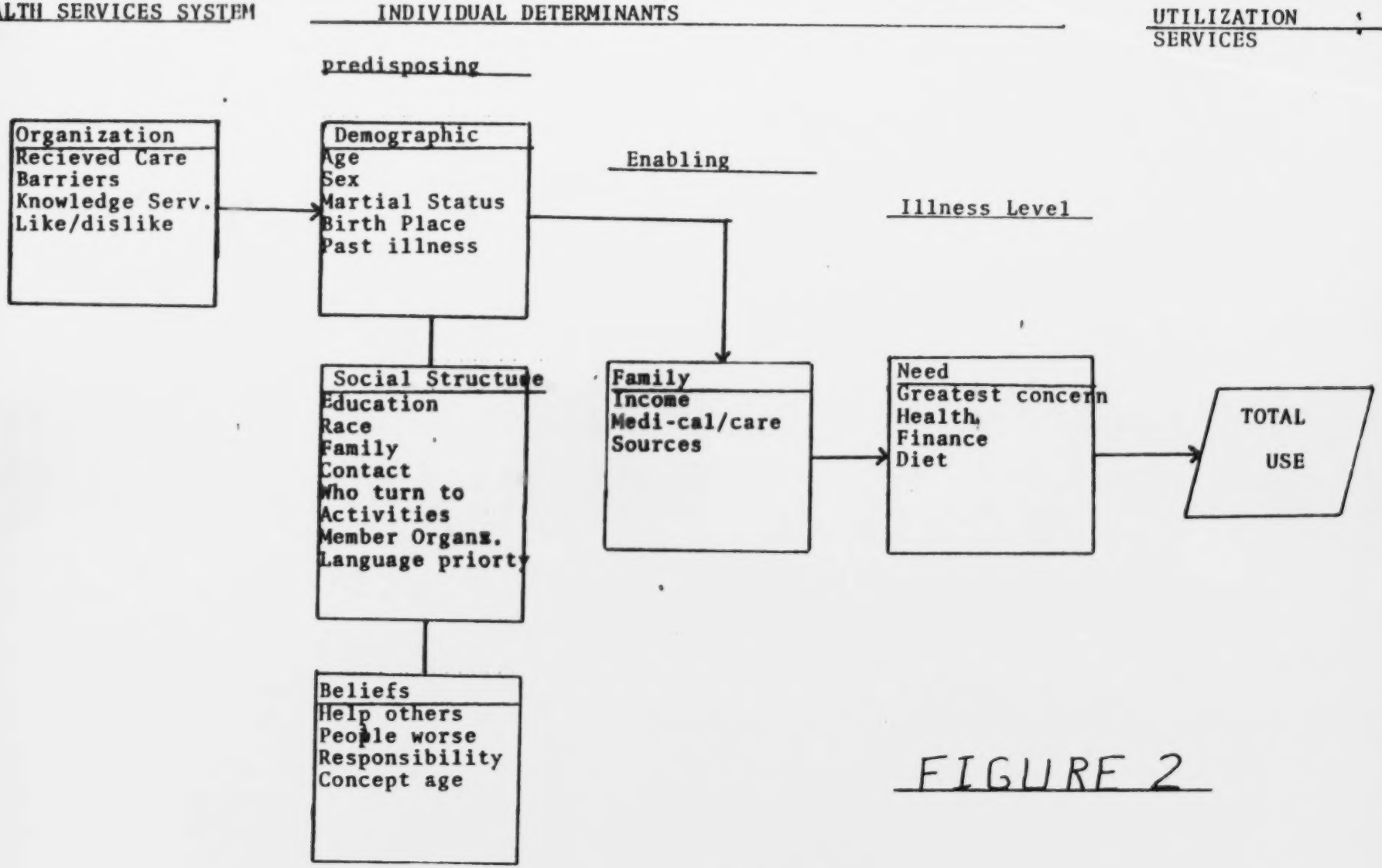

FIGURE 2

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